REMARKS

The following remarks address the issues presented in the Office Action dated October 5, 2010, in the order of their appearance.

Restriction Requirement:

Applicants thank the Examiner for withdrawing the prior restriction requirement to the extent it applies to Claim 22.

Applicants respectfully submit that restricting Claim 23 from the elected claims is improper pursuant to 37 CFR §1.475. This national phase application entered the US national phase via a PCT application. Therefore, 37 CFR §1.475 applies to this application. This rule is titled "Unity of invention before the International Searching Authority, the International Preliminary Examining Authority **and during the national stage**" (emphasis added). Note that the language of §1.475(b)(2) is mandatory: "An international or a national stage application containing claims to different categories of invention **will be considered to have unity of invention** if the claims are drawn only to one of the following combinations of categories… (2) (2) A product and process of use of said product." The presently active claims are drawn to a product (Claims 1-9 and 22) and a method of using that product (Claim 23). Applicants thus submit that Claim 23 must be examined along with the other active claims pursuant to the dictates of 37 CFR 1.475(b)(2).

In the list of claims contained in this response, Claim 23 is designated as "PREVIOUSLY PRESENTED," rather than "WITHDRAWN." Applicants respectfully request that the lack of unity holding with respect to Claim 23 be withdrawn and that Claim 23 be examined on the merits.

Rejection of Claims 1-9 and 22 under 35 USC §103(a) Over Ding (U.S. Patent No. 7,294,329) in View of Hsu et al. (U.S. Patent No. 6,340,465) and the Kollidon VA 64 Technical Information ("Kollidon Reference"); Rejection of Claims 1-8 under 35 USC §103(a) Over Ding, in View of Hsu et al. and the Kollidon Reference, and Further in View of Sass (U.S. Patent No. 6,383,215):

Because these two rejections are very closely related, Applicants will argue them together. These two rejections are respectfully traversed because the claims are directed to a druge-eluting coating, not a coating that retains the drug within the coating itself. As detailed below, there is no motivation to combination of Ding and Hsu et al. in the first place because the Hsu et al. reference is directed to a coating that retains a drug in place (within the coating), rather than permitting the drug to elute from the coating over a desired period of time. To modify Hsu's coating to perform in the manner required by the present claims thus destroys the stated utility of the Hsu et al. reference. It is well-settled law that where a proposed combination destroys the stated or intended utility or functionality of the device described in the applied reference, a *prima facie* case of obviousness has not been established. See MPEP §2143.01(V) and the cases cited therein.

More specifically, the coating composition recited in Claim 1 can be used to make a drug eluting coating with a controlled release profile. See the published specification at paragraph [0009] and the Examples starting at paragraph [0067]. In short, the plain meaning of "release" as the word is used throughout the specification means that drug molecules are dissolved away from the coating by body fluids, *i.e.*, the active agents are no longer present in the coating. See, for example, paragraph [0051] of the specification as published. Critically, Claim 1 **positively requires** that the vehicle is configured "to release the bioactive material when an implantable medical device onto which the coating is deposited is implanted."

To adjust the release rate of the drug to the desired amount per time, the two polymers recited in Claim 1 (*i.e.*, the "first compound" and the "second compound") that comprise the coating are mixed appropriately. By way of example, if a fast release profile were desired, a greater proportion of hydrophilic PnVPA would be used (with a concomitantly reduced proportion of the less hydrophobic PVB). If, however, a slower, but long-lasting release profile were desired, the concentration of PVB would increased and the concentration of PnVPA would

be reduced. In both circumstances, however, the vehicle is made such that it "releases the bioactive material when an implantable device onto which the coating is deposited is implanted." See the final clause of Claim1.

The coating described in the Ding reference does not include a second compound according to Formula 2 as recited in Claim 1. This fact is acknowledged on the record by the Office. See the Office Action at page 5, last two lines. Nevertheless, the Office takes the position that the second compound is described by Hsu et al., and therefore (according to the Office), the skilled pharmaceutical chemist would have combined Hsu et al. with Ding to arrive at the claimed invention. Applicants submit that this combination is improper, however, because it ignores the positive disclosure contained in Hsu et al. The Office is bound to interpret applied prior art references for all that they teach, including disclosed information that teaches away from the claimed invention.

Specifically, the coating described by Hsu et al. **is not** designed to release a drug. On the contrary, the main object of the coating describe by Hsu et al. is to "suspend" the drug within the coating and thereby anchor the drug in place. It is explicitly stated by Hsu et al. that the drug **is not** physically separated from the coating (column 5, line 60 to column 6, line 7 and column 12, lines 1 to 12) (emphasis added):

> For example, as an added benefit, in contrast to prior art methods for coating materials with biocompatible agents, the methods of the present invention securely and stably place biocompatible agents into the physiological tissue/fluid surface layer interface **where they can be active without having to be physically separated from the coating** and suspended or dissolved into solution, via entrapping or "suspending" those agents within a stable, crosslinked network or lattice. This enhances the long-term activity and storage capacity of articles and devices so treated.
>
> Moreover, **because the biocompatible components are entrapped within the network, they are stable and are less likely to leach from the coating**. This enhances the stability of the multi-functional surfaces and facilitates their storage and operability, as the functional aspects of the coatings (and coated surfaces) of the present invention will not degrade over time, as conventional coatings do. Thus, according to the present invention, biocompatible molecules or compositions which confer other useful properties on the coatings of the present invention-*e.g.* antimicrobial, antibacterial, and/or other bioactive properties-may be **entrapped** within the lattice structure of the within-described coating compositions.

Accordingly, the Hsu et al. reference neither mentions nor suggests adding PVP copolymers to a polymer coating in order to adjust the **release** profile of a drug present in the coating. Again, the present claims positively require that the drug present in the vehicle be released when implanted. To modify Hsu et al.'s teaching so that the coating described therein functions as a release agent destroys the stated utility and intended use of the Hsu et al. coating – namely to make a coating that entraps an active agent and holds it in place (rather than releasing the drug agent into the body). Applicants therefore traverse this rejection because there is no technical motivation to combine the references. The Office has not established a *prima facie* case of obviousness. Again, see MPEP 2143.01(V) and the cases cited therein.

In short, a person skilled in the art, trying to improve the **release** profile of the coating described in Ding, would not have found any motivation in Hsu et al. to use the PVP copolymers disclosed therein to modify the release properties because the Hsu et al. composition is not a drug-eluting coating, but a drug-entrapping coating. This runs directly contrary to the positive requirement of the final clause of Claim 1 of the present application.

The further combination with the Kollidon literature does not cure the fundamental shortcomings of the combination of Ding and Hsu et al. There is nothing in the Kollidon reference that would motivate the skilled practioner to use PVP copolymers for modifying the release profile of the coating described in Ding. The Kollidon literature is entirely irrelevant and contrary to Hsu et al. because, again, the Hsu et al. composition is **not** a drug-eluting coating, but a drug-entrapping coating.

The four-way combination including the Sass reference does not cure the shortcomings of the three-way combination of Ding, Hsu et al., and the Kollidon reference. As noted in Applicants' prior response, the Sass patent is cited solely for its teaching of 17β-estradiol. Therefore, the Sass disclosure is entirely irrelevant to the discussion above with respect to coating described in Ding as contrasted to the drug-entrapping coating described by Hsu et al. The lack of motivation to combine Ding and Hsu et al. remains even when the references are combined with Sass.

Additionally, as noted earlier, 17β-estradiol is recited only in Claim 8 of the present application. Thus, the Sass patent is irrelevant to Claims 1-7 of the application, none of which recite 17β-estradiol.

Accordingly, Applicants respectfully submit that these two rejections are improper. Withdrawal of the rejections is respectfully requested.

Rejection of Claims 1, 5-6, 9 and 22 Over Whitbourne et al., U.S. Patent No. 6,110,483 (with evidence provided by DuPont et al., U.S. Patent No. 5,026,771, and Dhaliwal et al. (2002) Thermochimica Acta 391:245-255):

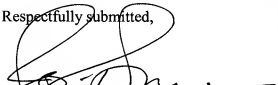
This rejection is respectfully traversed. The Whitbourne reference comprises little more than an essentially random list of polymers which can be used to make coatings. The Office has already stated on the record that there is no disclosure of the inventive combination of the two polymers required by Claim 1 in this document. See the Office Action at page 9, first full paragraph. Applicants traverse this rejection because there is no motivation supplied by Whitbourne for an ordinarily skilled pharmaceutical chemist to pick, for example, the combination of BUTVAR and PVP vinyl acetate in order to make the drug-eluting coating with an adjustable release profile now recited in the claims. In short, the Office has clearly used Applicants' own specification to provide the motivation that is lacking in the Whitbourne reference. The Office, however, is not at liberty to use Applicants' own specification in this fashion. The claimed invention must be suggested by the applied reference itself, not the applied reference in silent combination with Applicants' own disclosure.

The Office is not at liberty to ignore or dismiss the final clause of Claim 1 of the present application. See the bottom of page 9 of the Office Action. The word "configured" and the more conventional phrase "dimensioned and configured" are both structural terms and must be given patentable weight in interpreting the positive requirements of the claim. Applicants respectfully submit that the Office has improperly afforded the "configured" clause no patentable weight. However, the Office implicitly acknowledges in its argument at the bottom of page 9 of the Office Action that the Whitbourne reference does not describe or suggest a vehicle that is "configured to release the bioactive material when an implantable medical device onto which the coating is deposited is implanted." Because this is a positive recitation, it should be given patentable weight. In the absence of any direct teaching of suggestion of this positive recitation in the claims, Applicants submit this rejection is clearly improper. Withdrawal of the rejection is respectfully requested.

Conclusion:

Applicants submit the application is now in condition for allowance. Early notification of such action is earnestly solicited.

Respectfully submitted,



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